

UTILITY SERIAL NUMBER 08/ 09/061800		PATENT DATE		PATENT NUMBER	
SERIAL NUMBER 08/261,492	FILING DATE 06/17/94	CLASS 395	SUBCLASS 157	GROUP ART UNIT 2301 4303	EXAMINER 547 Fayer

APPLICANTS MITCHELL B. LONDON, REDMOND, WA; ALAN R. KATZ, BELLEVUE, WA; DONALD W. GOODRICH, AUBURN, WA; STEVEN ZECK, WOODINVILLE, WA.

CONTINUING DATA***
VERIFIED
None, f.f.

ABANDONED

FOREIGN/PCT APPLICATIONS***
VERIFIED
None, f.f.

FOREIGN FILING LICENSE GRANTED 11/30/94

Foreign priority claimed 35 USC 119 conditions met	<input type="checkbox"/> yes <input checked="" type="checkbox"/> no <input type="checkbox"/> yes <input checked="" type="checkbox"/> no	AS FILED →	STATE OR COUNTRY WA	SHEETS DRWGS. 2	TOTAL CLAIMS 12	INDEP. CLAIMS 6	FILING FEE RECEIVED \$1,088.00	ATTORNEY'S DOCKET NO. 870038.581
Verified and Acknowledged Examiner's Initials								

ADDRESS SEED AND BERRY
6300 COLUMBIA CENTER
SEATTLE WA 98104-7092

TITLE METHOD FOR PROVIDING REMOTE DISPLAY OF AN APPLICATION PROGRAM

U.S. DEPT. of COMM.-Pat. & TM Office-PTO-436L (rev. 10-78)

PARTS OF APPLICATION FILED SEPARATELY				Applications Examiner	
NOTICE OF ALLOWANCE MAILED		Assistant Examiner		CLAIMS ALLOWED	
				Total Claims	Print Claim
ISSUE FEE		Primary Examiner		DRAWING	
Amount Due	Date Paid			Sheets Drwg.	Figs. Drwg.
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08/261492

PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
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BAR CODE LABEL



U.S. PATENT APPLICATION

SERIAL NUMBER

08/261,492

FILING DATE

06/17/94

CLASS

395

GROUP ART UNIT

2301

APPLICANT

MITCHELL B. LONDON, REDMOND, WA; ALAN R. KATZ, BELLEVUE, WA; DONALD W. GOODRICH, AUBURN, WA; STEVEN ZECK, WOODINVILLE, WA.

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FOREIGN/PCT APPLICATIONS***
VERIFIED

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STATE OR
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WA

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TOTAL
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12

INDEPENDENT
CLAIMS

6

FILING FEE
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\$1,088.00

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SEATTLE WA 98104-7092

TITLE

METHOD FOR PROVIDING REMOTE DISPLAY OF AN APPLICATION PROGRAM

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By authority of the
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Date

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6300 Columbia Center
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US/201432

Express Mail Certificate No.: TB329833757
Docket No.: 870038.581
Date: June 17, 1994

**BOX PATENT APPLICATION
COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON DC 20231**

Sir:

Transmitted herewith for filing is the patent application of:

Inventor: Mitchell B. London, Alan R. Katz, Donald W. Goodrich and Steven Zeck

For: A METHOD FOR PROVIDING REMOTE
DISPLAY OF AN APPLICATION PROGRAM

Enclosed are:

- ☒ 2 sheets of informal drawings (Figures 1 + 2).
- ☐ An assignment of the invention to: SpaceLabs Medical, Inc., a corporation of the State of California.
- ☐ A certified copy of a _____ application.
- ☐ A Declaration and Power of Attorney.
- ☐ A verified statement to establish small entity status under 37 C.F.R. 1.9 and 37 C.F.R. 1.27.
- ☐ The filing fee has been calculated as shown below.
- ☒ Filed without fee or formal papers.

For:	No. Filed	No. Extra	Small Entity		or	Other Than A Small Entity	
			Rate	Fee		Rate	Fee
Utility Fee			\$355		or	\$710	
Total Claims		<u>12</u>	x 11	\$	or	x 22	\$
Independent Claims		<u>6</u>	x 37	\$	or	x 74	\$
() Multiple Dependent Claim Presented			+ 110	\$	or	+ 220	\$
ASSIGNMENT			+ 40	\$		+ 40	\$
TOTAL			\$		or	TOTAL	\$

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- ☐ A check in the amount of \$____ is enclosed.
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- ☐ Any additional filing fees required under 37 C.F.R. 1.16.
- ☐ Any patent application processing fees under 37 C.F.R. 1.17.

Respectfully submitted,
SEED and BERRY


John R. Carpenter
Registration No. 38,096

**PATENT**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Mitchell B. London, Alan R. Katz,
Donald W. Goodrich and Steven Zeck

Title : A METHOD FOR PROVIDING REMOTE
DISPLAY OF AN APPLICATION PROGRAM

Docket No. : 870038.581

Date : June 17, 1994

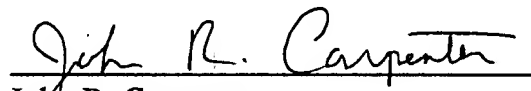
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CERTIFICATE OF MAILING BY "EXPRESS MAIL"

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Respectfully submitted,
SEED and BERRY


John R. Carpenter

Enclosures:

Postcard
PTO Form 1082 (+ copy)
Specification, Claims and Abstract

DescriptionMETHOD FOR PROVIDING REMOTE DISPLAY
OF AN APPLICATION PROGRAM

5

Technical Field

The present invention relates to the remote display of an application program, and more specifically, providing a method and system that allows an application program to be interacted with remotely while the application program is being run in its native environment.

Background of the Invention

Currently, there are approximately 50 million computer users that utilize a graphical user interface known as Windows™ by Microsoft Corporation. Currently, the Windows/NT™ is rapidly emerging as a preferred operating system. Consequently, a large number of application programs are written to be compatible with Windows/NT™. Windows/NT™ provides a single graphical user interface in which all these application programs must adhere to. However, a client/server window system known as "X" and initially developed at the Massachusetts's Institute of Technology provides a protocol (X-Protocol) that allows application programs to be displayed with a variety of graphical user interfaces (*i.e.*, Motif, Open-Look). Unfortunately, the application programs that are developed for the Windows/NT™ operating system are not compatible with the X protocol. Consequently, users of the X client/server window system do not have access to these application programs. This is unfortunate because many of the application programs developed for the Windows/NT™ operating system are superior, in terms of cost and features, to those than developed for the X client/server window system.

Summary of the Invention

The present invention is directed towards a facility that provides remote access to an application program. More specifically, the facility that is executing on a host machine in its native operating system environment. The facility monitors messages that are relayed from the application program to an application interface that is provided via the native operating system. Upon recognizing a message that affects a graphical user interface of the native operating system, the facility converts the message into a protocol that is

recognized by a remote graphical user interface. By monitoring and converting messages in this fashion, the facility allows the application program to be displayed remotely.

5 Brief Description of the Drawings

Figure 1 illustrates a preferred embodiment of the present invention.

Figure 2 is a flow diagram of the processing steps of the preferred embodiment of the present invention.

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Detailed Description of the Invention

The present invention is directed towards a facility that allows an application program to be remotely displayed while it is executing in its native operating system on a host computer. In its preferred embodiment, the present invention provides for the remote display of application programs that are
15 executing under the Windows/NT™ operating system. More specifically, the preferred embodiment treats such applications as X-clients in order to allow the application to be remotely displayed on X terminals. The term "X-client" refers to an application program that is compatible with the previously-described X
20 client/server window system. As defined herein, the term "X-terminal" refers to any display component (e.g., stand alone terminal or work station) that is compatible with the X-client/server windowing system. An attractive feature of an X-client is that it is compatible with any video display provided that there is a suitable communications link (e.g., the TCP/IP protocol described below)
25 connecting the X-client and the display.

In the X-client/server window system an X-client communicates with the display with a component known as an X-server. The X-server controls the display hardware (e.g., a video display, a keyboard, or mouse). The X-server is responsible for conducting the drawing and rendering of the video display. A
30 separate X-client, known as a window manager, acts in coordination with the X-server to manage the display. More specifically, the window manager keeps track of the state of all X-windows. As defined herein, the term "X-window" refers to any portion of an X-terminal's display that contains its own data (e.g., a document or a message). A primary advantage of the X-client/server window
35 system is that it does not constrain an X-client to use any particular window manager. Instead, a user may select the window manager that he or she believes offers the most attractive look and feel.

Figure 1 illustrates a preferred embodiment of the present invention. A host computer 110 executes application programs such as Microsoft Excel™ 120 and Word for Windows™ 130 under the NT operating system 140. The Windows/NT™ operating system, as well as the application programs 120, 130, are contained within a main memory of the host computer. More specifically, a central processing unit contained within the host computer 110 executes the instructions of both the Windows/NT™ operating system 140 and the application programs 120, 130. The Windows/NT™ operating system provides an application program interface that allows these application programs 120, 130 to communicate with the operating system 140. Additionally, the Windows/NT™ operating system also provides a standard graphical user interface that defines the look and feel for all applications running under Windows-NT. This standard graphical user interface is designed to receive commands from the application program so that the Windows/NT™ operating system can update the video display. Additionally, the Windows-NT operating system does not provide for remote interaction with applications. In brief, the application programs 120, 130 utilize the application interface to request the operating system to conduct a variety of tasks. For example, representative tasks include the opening and closing of files, as well as making various adjustments to the graphical user interface. In its preferred embodiment, the present invention allows these application programs 120, 130 to be executed on the host computer while being displayed remotely on an X terminal 150. In this manner, the present invention allows users of the X client/server window system to gain access to application developed for the Windows/NT™ operating system. Moreover, as the preferred embodiment of the present invention allows the application programs 120, 130 to be executed in their native operating system environments (e.g., the Windows/NT™ operating system 140). The present invention provides such access in a highly efficient manner.

As illustrated, the host computer 110 is connected to the X terminals 150 via a network connection such as the TCP/IP protocol used on the Ethernet. In brief, this protocol consists of a series of layers. More specifically, the five lower-most layers in ascending order are the wire, the Ethernet, the Internet protocol (IP layer), the transport control protocol (TCP layer) and the X protocol. This network connection is conceptually illustrated by reference 160.

As described above, the X client/server window system utilizes two components: an X-server 170 and a window manager 180. The window manager 180 manages X-windows by keeping track of how many X-windows

are currently displayed, where the X-windows are currently displayed, etc. As the present invention converts the Windows/NT™ application to a fully compatible X-client, a user may select a particular window manager 180 (e.g., Motif, Open-Look, Tom's Window Manager) for use with the present invention.

5 As explained above, the typical user selects a window manager 180 based upon the look or feel that the user is most comfortable with. In brief, the window manager 180 receives commands that relate to the display of the X terminals 150. As the window manager 180 may be contained within the X terminal itself or on the network, the window manager may receive commands
10 over the network connection 160 or directly from the X terminals 150. Having described the configuration for the apparatus of the preferred embodiment of the present invention, the processing steps will now be described in detail.

Figure 2 illustrates the processing steps of the preferred embodiment of the present invention. Initially, an application program is
15 executed in its native environment (step 210). In the preferred embodiment of the present invention, this native environment is the Windows/NT™ operating system. However, those skilled in the art will appreciate that the inventive concepts disclosed within are not limited to any particular operating system. Once the application program is executing in its native environment, the
20 preferred embodiment monitors the commands that the application relays to the native environment (step 220). More specifically, the preferred embodiment monitors these commands by evaluating data that is relayed via an application program interface (e.g., the application program interface provided by Windows/NT™). The present invention then evaluates whether the monitored
25 command affects the graphical user interface (step 230). For example, a command affects the graphical user interface, when the results of the command alter the video display. When the monitored command does not affect the graphical user interface, the preferred embodiment allows the device driver of the native environment to process the command (step 240). On the other hand,
30 when the command does affect the graphical user interface (e.g., when the command resizes or moves a window or otherwise affects display data), the preferred embodiment suspends the native device driver's ability to process the command (steps 230 and 250). Subsequently, the preferred embodiment converts the command into a format that is recognizable by a remote graphical
35 user interface (step 260). In the preferred embodiment of the present invention, this graphical user interface is known as X. Consequently, the preferred embodiment converts the command to that of the X-Protocol, however, those

skilled in the art will appreciate that the inventive concepts disclosed herein are not limited to any particular remote graphical user interface. Once the command has been converted, the remote graphical user interface is allowed to act on the command (step 270). Subsequently, the preferred embodiment informs the native environment of the results of the command (*e.g.*, how the remote graphical user interface has repositioned a window) (step 280). By continuing processing steps 220-280 while the application program is executing, the present invention allows the application program to be executed in its native environment while simultaneously allowing the application to be interacted with remotely on a remote terminal or work station.

As explained in this preferred embodiment, the present invention allows application programs that are executed under the Windows/NT™ operating system to be interacted with remotely via the X client/server system. One particularly advantageous use of the preferred embodiment relates to the field of medical technology. More specifically, by incorporating the present invention in the Multi-Disclosure Review Station manufactured by SpaceLabs, Incorporated utilizes a medical monitor as an X-server. This specialized X-server then renders the patient's critical data (*e.g.*, a heart wave-form) on an accompanying X-terminal. With the advent of the present invention, not only can the physician view a patient's heart wave-form on this terminal, but the physician can also access application programs written for the Windows/NT™ operating system. As a result, the physician's work is greatly simplified. For example, an application such as Excel™ can be used to maintain a database of the patient's medical history. Thus, the present invention allows the physician to retrieve the patient's up-to-date medical history while simultaneously viewing the patient's heart wave-form. As the present invention provides simultaneous access to current and past medical conditions, the physician can quickly and easily obtain all the information that is necessary to treat the patient via a single terminal. Thus, the physician can work more efficiently.

The detailed discussion provided above illustrates the preferred embodiment of the present invention. However, those skilled in the art will realize that various modifications may be made to this embodiment without departing from the spirit and the scope of the invention. Accordingly, the invention is not limited except by the appended claims.

Claims

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AL
1. A method for running a Windows-NT application as an X-client so as to enable the application to be displayed with an X-windows manager, the Windows-NT application having a device driver, the method comprising the steps of:
 - launching a Windows-NT session;
 - invoking at least a Windows-NT application from within the Windows-NT session;
 - monitoring output messages that are sent from the Windows-NT application;
 - determining when one of the monitored output messages is a graphical user interface command;
 - when the monitored output message is a graphical user interface command, suspending the Windows-NT device driver from acting on the command, allowing an X-Windows manager program to act on the command, and informing the Windows-NT device driver of results of the command which was acted on by the X-Windows manager program.
 2. The method of claim 1, further comprising the step of:
 - converting the command from the Windows-NT format into a format that is interpretable by the X-windows manager so as to allow the X-windows manager to act on the command.
 3. A method for providing remote access to an application program that is executing in a native operating system, wherein the native operating system provides an application interface to receive commands from the application program, and wherein the operating system provides a graphical user interface in which it receives commands from the application program, the method comprising the steps of:
 - monitoring a message that is output from the application program to the application interface;
 - intercepting the monitored message when the message is an operation that affects external features of the graphical user interface;
 - redirecting the intercepted message to a non-native graphical user interface manager to enable the non-native graphical user interface manager to conduct the operation of the monitored message.

4. The method of claim 3, further comprising the step of:
informing the native operating system of results of the intercepted message.

5. A method for providing remote display and interaction with an application program that is executing on a local machine, the local machine executing the application in a native operating system, wherein the native operating system provides an local application interface to receive commands from the application program, and wherein the operating system provides a local graphical user interface in which it receives commands from the application program, the method comprising the steps of:

detecting a command that is output from the application program to the application interface; and

converting the detected message from a local graphical user interface format to a remote graphical user interface format so that the detected message can be interpreted by a remote graphical user interface.

6. The method of claim 5 wherein the remote graphical user interface is a graphical user interface known as X.

7. The method of claim 5 wherein the native operating system is an operating system known as Windows-NT.

8. A method for providing remote user interaction with an application program that is being run in its native environment on a host machine, the native environment providing a local graphical user interface for allowing local user interaction with the application program, the method comprising the steps of:

determining when the application program has sent a command to the local graphical user interface;

suspending the local user interface's ability to process the determined command; and

converting the determined command to a protocol that is recognizable by a remote graphical interface.

9. The method of claim 8 wherein the remote graphical user interface is a graphical user interface known as X.

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A2

10. A method for providing remote user interaction with an application program that is being run in a first environment, the method comprising the steps of:

determining when the application program has sent a command that is intended to affects a video display; and

converting the determined command to a protocol that is recognizable by a second environment, wherein the second environment is distinct from the first environment.

11. The method of claim 10 wherein the first environment is a native environment for which the application program was developed and wherein the second environment is a remote windowing environment.

12. An apparatus that allows an application program to be treated as a remote X-client while the application program is running in a non-Unix environment, the apparatus comprising:

a monitoring device that determines when the application program has sent a command to a local graphical user interface, the local graphical user interface being provided by the non-Unix environment;

a disabling device that suspends the local user interface's ability to process the determined command; and

a modifier that converts the determined command to a protocol that is recognizable by a remote graphical interface.

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METHOD FOR PROVIDING REMOTE DISPLAY
OF AN APPLICATION PROGRAM

Abstract of the Disclosure

The present invention is directed towards a facility that provides remote access to an application program that is executing on a host machine in its native operating system environment. The facility monitors messages that are relayed from the application program to an application interface that is provided via the native operating system. Upon recognizing a message that affects a graphical user interface of the native operating system, the facility converts the message into a protocol that is recognized by a remote graphical user interface. By monitoring and converting messages in this fashion, the facility allows the application program to be displayed remotely.

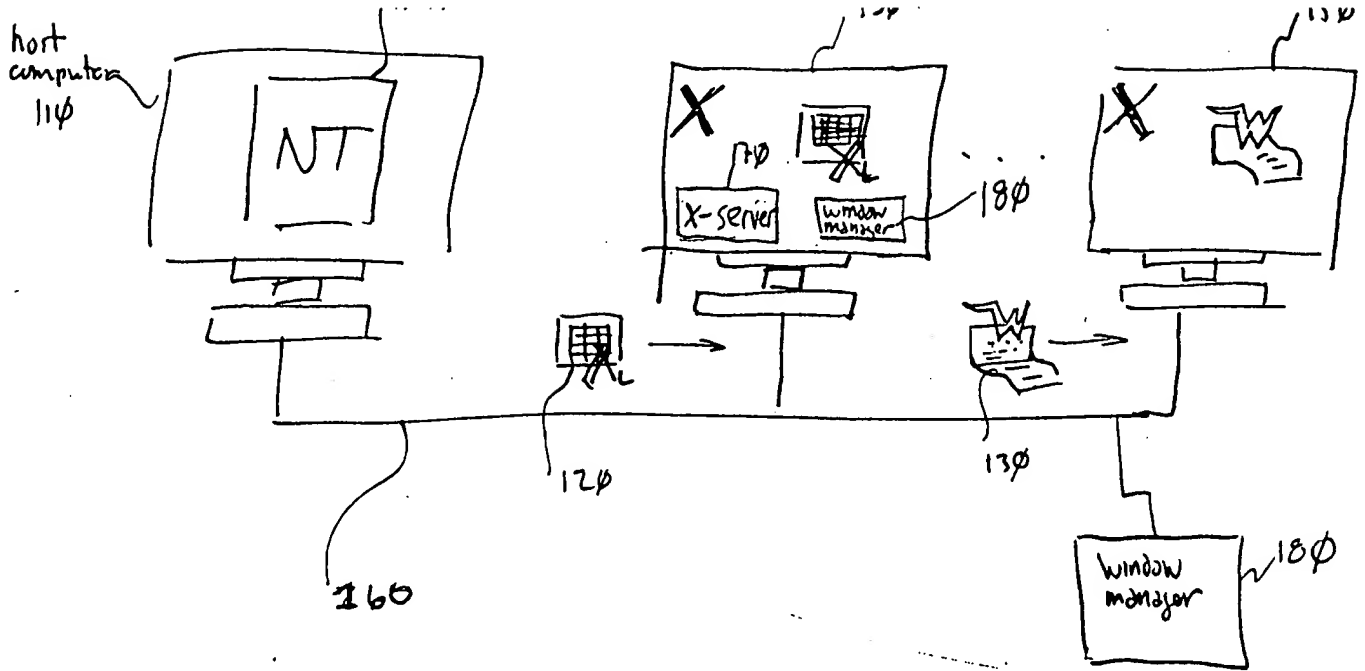


FIG 1.

08/261492

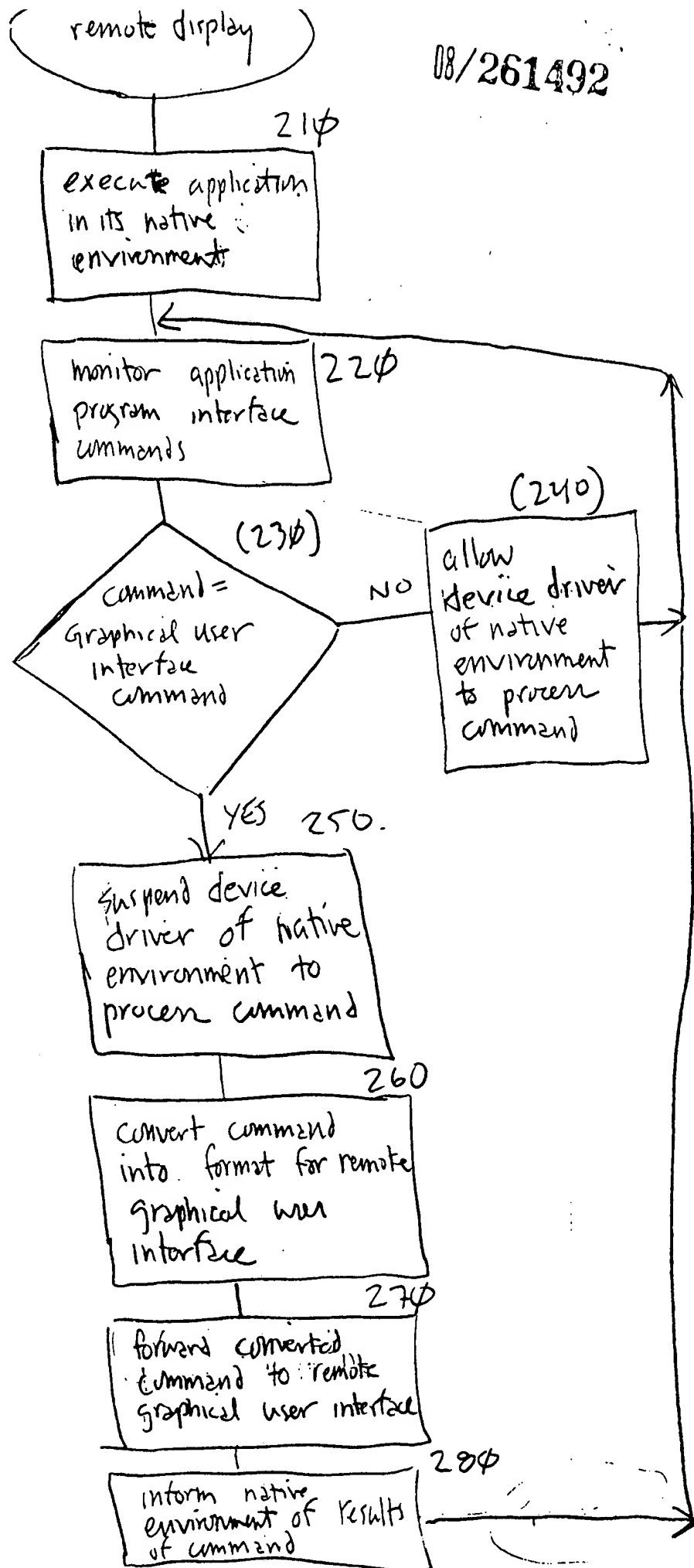


FIG 7

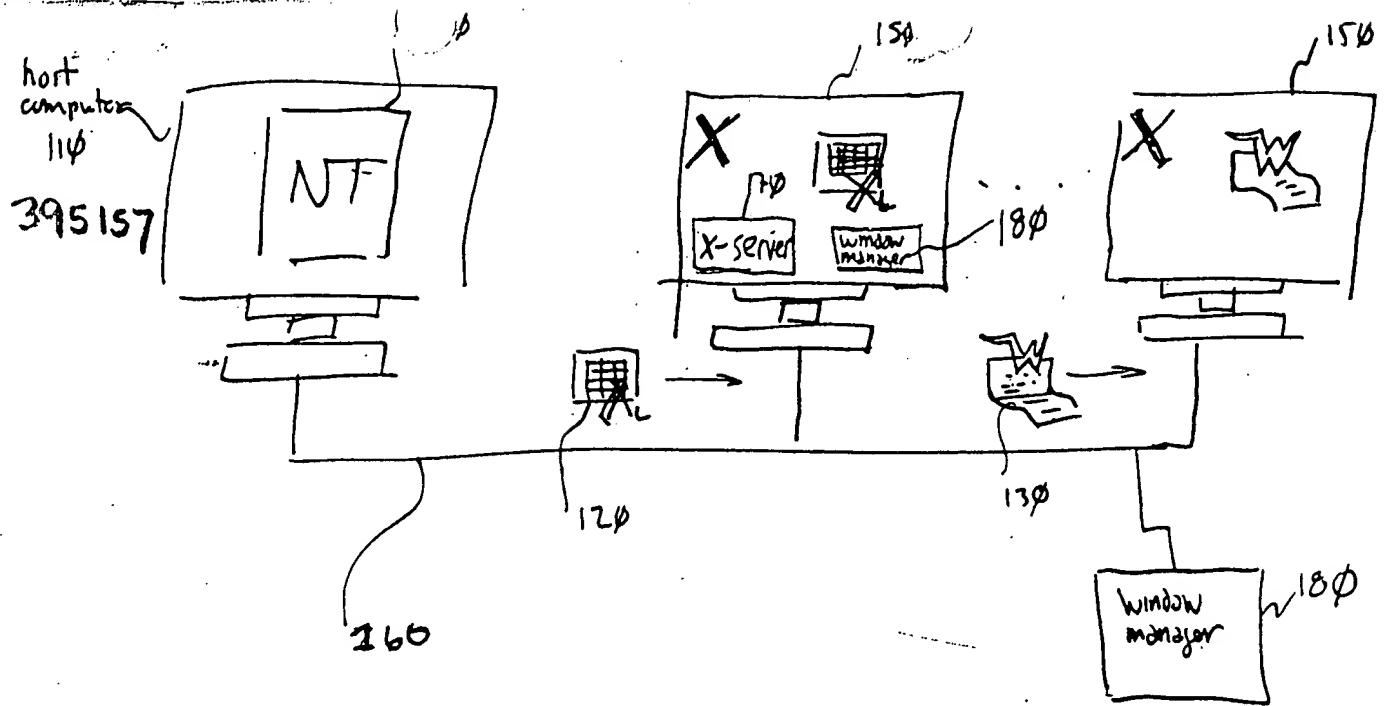


FIG. 1.

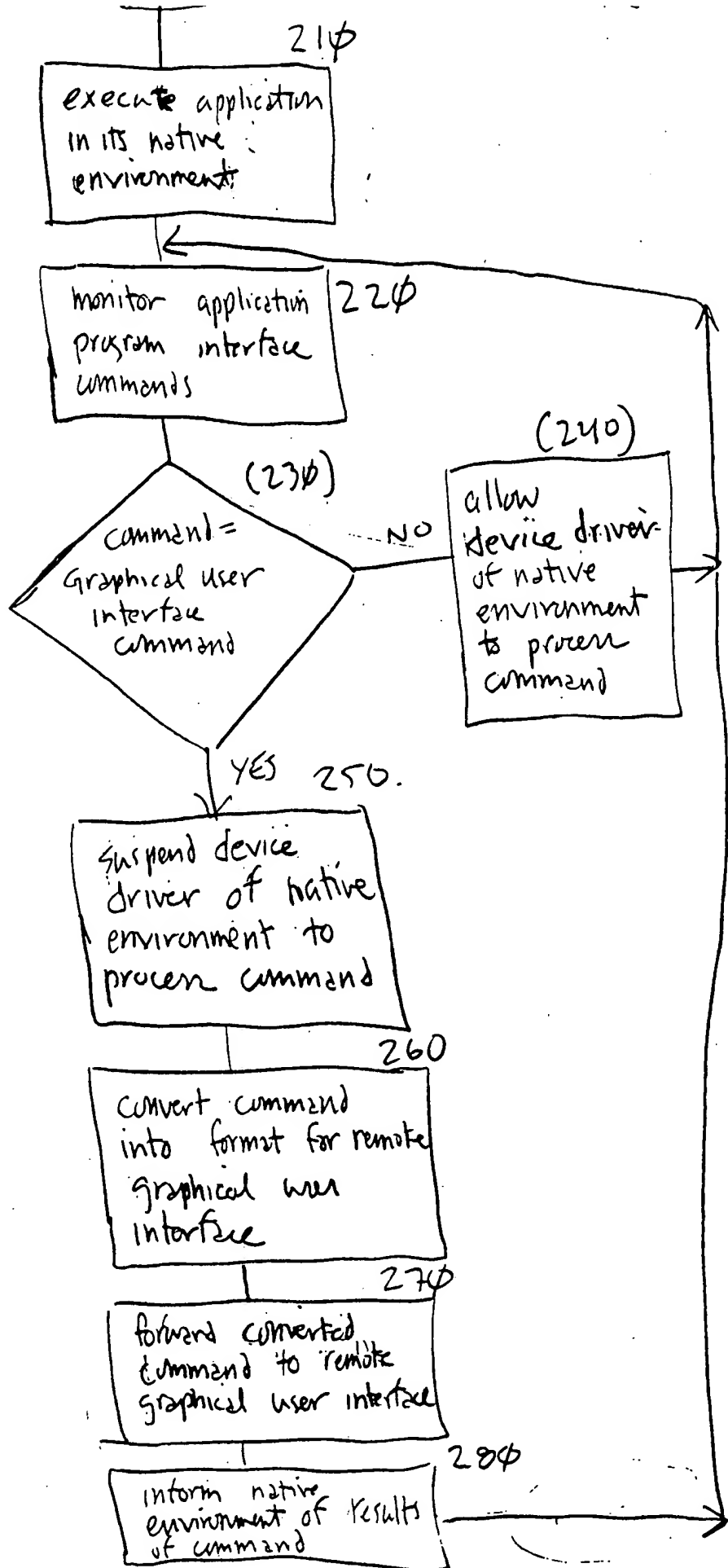


FIG 2

03B1/0719

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SEATTLE, WA 98104-7092

0000

DATE MAILED: 07/19/94

**NOTICE TO FILE MISSING PARTS OF APPLICATION
FILING DATE GRANTED**

An Application Number and Filing Date have been assigned to this application. However, the items indicated below are missing. The required items and fees identified below must be timely submitted **ALONG WITH THE PAYMENT OF A SURCHARGE** for items 1 and 3-6 only of \$ 130.00 for large entities or \$ 65.00 for small entities who have filed a verified statement claiming such status. The surcharge is set forth in 37 CFR 1.16(e).

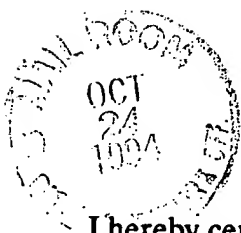
If all required items on this form are filed within the period set below, the total amount owed by applicant as a ☒ large entity, ☐ small entity (verified statement filed), is \$ 1063.00.

Applicant is given **ONE MONTH FROM THE DATE OF THIS LETTER, OR TWO MONTHS FROM THE FILING DATE** of this application, **WHICHEVER IS LATER**, within which to file all required items and pay any fees required above to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

1. ☒ The statutory basic filing fee is: ☒ missing ☐ insufficient. Applicant as a ☒ large entity ☐ small entity, must submit \$ 710.00 to complete the basic filing fee.
2. ☒ Additional claim fees of \$ 222.00 as a ☒ large entity, ☐ small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
3. ☒ The oath or declaration:
☒ is missing.
☐ does not cover items omitted at time of execution.

An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date is required.
4. ☐ The oath or declaration does not identify the application to which it applies. An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
5. ☐ The signature to the oath or declaration is: ☐ missing; ☐ a reproduction; ☐ by a person other than the inventor or a person qualified under 37 CFR 1.42, 1.43, or 1.47. A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
6. ☐ The signature of the following joint inventor(s) is missing from the oath or declaration:

_____ An oath or declaration listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date, is required.
7. ☐ The application was filed in a language other than English. Applicant must file a verified English translation of the application and a fee of \$ _____ under 37 CFR 1.17(k), unless this fee has already been paid.
8. ☐ A \$ _____ processing fee is required for returned checks. (37 CFR 1.21(m)).
9. ☐ Your filing receipt was mailed in error because check was returned without payment.
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October 19, 1994
Date

Edward W. Bulchis
Edward W. Bulchis

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Mitchell B. London, Alan R. Katz,
Donald W. Goodrich and Steven Zeck
Serial No. : 08/261,492
Filed : June 17, 1994
For : METHOD FOR PROVIDING REMOTE DISPLAY
OF AN APPLICATION PROGRAM
Docket No. : 870038.581
Date : October 19, 1994

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SPECIAL PROCESSING AND CORRESPONDENCE BRANCH
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WASHINGTON DC 20231

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

Sir:

In response to the Notice to File Missing Parts dated July 19, 1994, please find enclosed a Declaration and Power of Attorney and Form PTO-1533 for the above-identified application.

Please find enclosed a Request for an Extension of Time, extending the time for response from August 19, 1994, to October 19, 1994.

We are enclosing our Check in the amount of \$1458 for the requisite fee.

The fee has been calculated as follows:

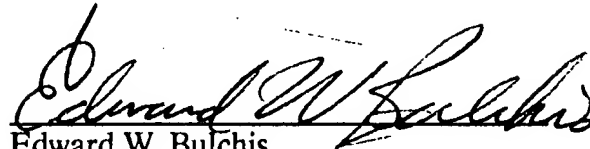
Basic Fee	\$ 730
Total Claims (12, 0 extra)	
Independent Claims (6, 3 extra)	228
Multiple Claims Surcharge	
Missing Parts Surcharge	130
Total	\$1088
Extension of Time Fee	370
TOTAL	\$1458

The Commissioner is hereby authorized to charge any additional filing fees or to credit any overpayment to Deposit Account No. 19-1090. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

Mitchell B. London et al.

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Edward W. Bulchis
Registration No. 26,847

EWB:jb

Enclosures:

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October 19, 1994
Date

Edward W. Bulchis
Edward W. Bulchis

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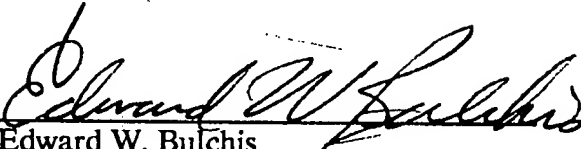
Basic Fee	\$ 730
Total Claims (12, 0 extra)	
Independent Claims (6, 3 extra)	228
Multiple Claims Surcharge	
Missing Parts Surcharge	130
Total	\$1088
Extension of Time Fee	370
TOTAL	\$1458

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Respectfully submitted,

Mitchell B. London et al.

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Registration No. 26,847

EWB:jb

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Request for Extension of Time (+ 2 copies)

6300 Columbia Center
Seattle, Washington 98104-7092
(206) 622-4900
Fax: (206) 682-6031

b:0300

SEED & BERRY
6000 COLUMBIA CENTER
SEATTLE, WA 98104-7022

0000

DATE MAILED: 07/19/94

NOTICE TO FILE MISSING PARTS OF APPLICATION FILING DATE GRANTED

An Application Number and Filing Date have been assigned to this application. However, the items indicated below are missing. The required items and fees identified below must be timely submitted **ALONG WITH THE PAYMENT OF A SURCHARGE** for items 1 and 3-6 only of \$ 130.00 for large entities or \$ 130.00 for small entities who have filed a verified statement claiming such status. The surcharge is set forth in 37 CFR 1.16(e).

If all required items on this form are filed within the period set below, the total amount owed by applicant as a ☒ large entity, ☐ small entity (verified statement filed), is \$ 130.00.

Applicant is given **ONE MONTH FROM THE DATE OF THIS LETTER, OR TWO MONTHS FROM THE FILING DATE** of this application, **WHICHEVER IS LATER**, within which to file all required items and pay any fees required above to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

1. ☐ The statutory basic filing fee is: ☐ missing ☐ insufficient. Applicant as a ☐ large entity ☐ small entity, must submit \$ 77.00 to complete the basic filing fee.
2. ☐ Additional claim fees of \$ 273.00 as a ☐ large entity, ☐ small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.
3. ☐ The oath or declaration:
 - ☐ is missing.
 - ☐ does not cover items omitted at time of execution.

An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date is required.

4. ☐ The oath or declaration does not identify the application to which it applies. An oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
5. ☐ The signature to the oath or declaration is: ☐ missing; ☐ a reproduction; ☐ by a person other than the inventor or a person qualified under 37 CFR 1.421, 1.423, or 1.428. ☒ A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required. 1 105 130.00 CK
6. ☐ The signature of the following joint inventor(s) is missing from the oath or declaration:

_____ An oath or declaration listing the names of all inventors and signed by the omitted inventor(s), identifying this application by the above Application Number and Filing Date, is required.

7. ☐ The application was filed in a language other than English. Applicant must file a verified English translation of the application and a fee of \$ _____ under 37 CFR 1.17(k), unless this fee has already been paid.
8. ☐ A \$ _____ processing fee is required for returned checks. (37 CFR 1.21(m)).
9. ☐ Your filing receipt was mailed in error because check was returned without payment.
10. ☐ The application does not comply with the Sequence Rules. See attached Notice to Comply with Sequence Rules 37 CFR 1.821-1.825.
11. ☐ Other.

Direct the response and any questions about this notice to 170, Application Processing



DECLARATION AND POWER OF ATTORNEY

As the below-named inventors, we declare that:

Our residences, post office addresses, and citizenships are as stated below under our names.

We believe we are the original, first, and joint inventors of the invention entitled "METHOD FOR PROVIDING REMOTE DISPLAY OF AN APPLICATION PROGRAM," which is described and claimed in the specification and claims of patent application Serial No. 08/261,492, which we filed in the United States Patent and Trademark Office on June 17, 1994 and for which a patent is sought.

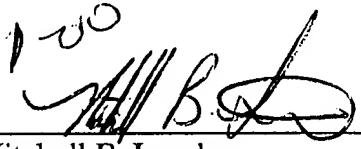
We have reviewed and understand the contents of the above-entitled specification, including the claims, as amended by any amendment specifically referred to herein (if any).

We acknowledge our duty to disclose information of which we are aware which is material to the examination of this application in accordance with 37 C.F.R. § 1.56(a).

31 We hereby appoint RICHARD W. SEED, Registration No. 16,557; ROBERT J. BAYNHAM, Registration No. 22,846; EDWARD W. BULCHIS, Registration No. 26,847; GEORGE C. RONDEAU, JR., Registration No. 28,893; DAVID H. DEITS, Registration No. 28,066; WILLIAM O. FERRON, JR., Registration No. 30,633; PAUL T. MEIKLEJOHN, Registration No. 26,569; DAVID J. MAKI, Registration No. 31,392; RICHARD G. SHARKEY, Registration No. 32,629; GEORGE B. FOX, Registration No. 31,510; DAVID V. CARLSON, Registration No. 31,153; MAURICE J. PIRIO, Registration No. 33,273; KARL R. HERMANN, Registration No. 33,507; DAVID D. McMASTERS, Registration No. 33,963; ROBERT IANNUCCI, Registration No. 33,514; JOSHUA KING, Registration No. 35,570; MICHAEL J. DONOHUE, Registration No. 35,859; LORRAINE LINFORD, Registration No. 35,939; KEVIN J. CANNING, Registration No. 35,470; PATRICIA E. CHAMBERLAIN, Registration No. 37,038; CHRISTOPHER J. DALEY, Registration No. 34,807; TIMOTHY J. CREAN, Registration No. 37,116; STEVEN D. LAWRENZ, Registration No. 37,376; ROBERT G. WOOLSTON, Registration No. 37,263; MANYA S. DEEHR, Registration No. 37,120; CLARENCE T. TEGREENE, Registration No. 37,951; TARA A. PHILLIPS, Registration No. 35,980; LAWRENCE W. NELSON, Registration No. 34,684; ALEXANDER E. SILVERMAN, Registration No. 37,940; JOHN R. CARPENTER, Registration No. P-38,096; and ELLEN M. BIERMAN, Registration No. P-38,079, composing the firm of SEED and BERRY, 6300 Columbia Center, Seattle, Washington 98104-7092, our

attorneys to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. Please direct all telephone calls to John R. Carpenter at (206) 622-4900 and telecopies to (206) 682-6031.

We further declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that the making of willfully false statements and the like is punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and may jeopardize the validity of any patent issuing from this patent application.

100


 Mitchell B. London

Date 10/17/1994

Residence : City of Redmond, County of King
 State of Washington

Citizenship : United States of America

P.O. Address : 2112 - 179th Court NE
 Redmond, Washington 98052-6064

WA

200


 Alan R. Katz

Date 10/17/94

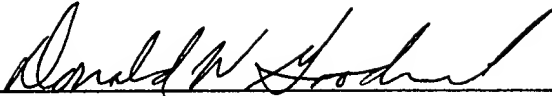
Residence : City of Bellevue, County of King
 State of Washington

Citizenship : United States of America

P.O. Address : 1016 - 168th Ave. SE
 Bellevue, Washington 98008

WA

3-00

Donald W. GoodrichDate August 24, 1994Residence : City of Auburn, County of King
State of Washington WA

Citizenship : United States of America

P.O. Address : 2971 - 53rd Street SE
Auburn, Washington 98092-83104-00 Steven ZeckDate 10/18/94Residence : City of Woodinville, County of King
State of Washington

Citizenship : United States of America

P.O. Address : 15141 - 152nd Ave. NE
Woodinville, Washington 98072

I hereby certify that on the date specified below, this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington, DC 20231.

October 19, 1994
Date

Edward W. Bulchis
Edward W. Bulchis

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Mitchell B. London, Alan R. Katz,
Donald W. Goodrich and Steven Zeck
Serial No. : 08/261,492
Filed : June 17, 1994
For : METHOD FOR PROVIDING REMOTE DISPLAY
OF AN APPLICATION PROGRAM

Docket No. : 870038.581

Date : October 19, 1994

COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON DC 20231

REQUEST FOR EXTENSION OF TIME

Sir:

Please extend the period of response for Serial No. 08/261,492 for 2 months, from August 19, 1994, to October 19, 1994. A check in the amount of \$1458 is enclosed; \$370 of which is to cover the fee for the extension of time.

The Commissioner is authorized to charge payment of any fees under 37 C.F.R. §§ 1.16 and 1.17 associated with this communication or credit any overpayment to Deposit Account No. 19-1090. This request is being submitted in triplicate.

Respectfully submitted,

Mitchell B. London et al.

SEED and BERRY

Edward W. Bulchis
Edward W. Bulchis
Registration No. 26,847

EWB:jb

Enclosures:

Two copies of request

080 HC 11/03/94 08/261,492
6300 Columbia Center
Seattle, Washington 98104-7092
(206) 622-4900
Fax: (206) 682-6031
jb:0501

1 116 370.00 CK

OCT
24
1994

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Seattle, Washington 98104-7092
(206) 622-4900
Fax: (206) 682-6031

jb:0501

PATENT

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SEED and BERRY

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Edward W. Bulchis
Registration No. 26,847

EWB:jb

Enclosures:

Two copies of request

6300 Columbia Center
Seattle, Washington 98104-7092
(206) 622-4900

Fax: (206) 622-6021

SERIAL NUMBER: 08/261,492 FILING DATE: 06/17/94 FIRST NAMED INVENTOR: LONDON

M 870038,581

EXAMINER

SAX, S

24M1/0614

ART UNIT

PAPER NUMBER

SEED AND BERRY
6300 COLUMBIA CENTER
SEATTLE WA 98104-7092

2415

DATE MAILED:

06/14/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-12 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-12 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

Art Unit: 2415

1. This application has been examined.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 3-5, 8, and 10-11 are rejected under 35 U.S.C. § 102(e) as being anticipated by Eagen et. al. (5461716).

4. Regarding claims 3-5, 8, and 10-11, Eagen et. al. show in Figure 9, column 5 lines 1-26, column 6 lines 5-60, column 7 lines 5-51, and column 8 lines 1-62, a system for providing remote access to application programs executing in a native operating system, wherein the native operating system provides an application interface to receive commands from the application program, and wherein the operating system provides a graphical user interface in which it receives commands from the application program. The system monitors a message output from the application program to the interface, intercepts it if it affects the external features of the graphical user interface, redirects the intercepted message to a non-native graphical user interface

Art Unit: 2415

manager to conduct the operation, and informs the native system of the results. The detected commands are converted to a remote and distinct format protocol and the local user interface's ability to process the commands is suspended. The commands affect the video display and the environment in which the applications are run is a windowing environment.

5. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

6. Claims 1-2, 6-7, 9, and 12 are rejected under 35 U.S.C. § 103 as being unpatentable over Eagen et. al. (5461716).

7. Regarding claims 1-2, 6-7, 9, and 12, Eagen et. al. show the features of the invention as described above with the windows

Serial Number: 08/261492

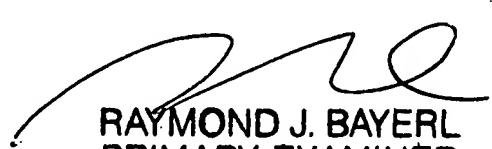
-4-

Art Unit: 2415

environment operating system and client window managers. The application program is running in a non-Unix environment. Eagen et. al. do not go into the specific details of a Windows NT operating system or X client interface manager. However, these systems are well known in the art as admitted by applicant. It would have been obvious to a person with ordinary skill in the art to utilize the invention of Eagen et. al. for a Windows NT operating system and the X interface manager, because those would be convenient and efficient systems in which to utilize an invention that provides remote display and access to application programs executing in a native operating system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Sax whose telephone number is (703) 305-9582.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



RAYMOND J. BAYERL
PRIMARY EXAMINER
ART UNIT 2415

NOTICE OF DRAFTSPERSON'S PATENT DRAWING REVIEW

PTO Draftpersons review all originally filed drawings regardless of whether they are designated as formal or informal. Additionally, patent Examiners will review the drawings for compliance with the regulations. Direct telephone inquiries concerning this review to the Drawing Review Branch, 703-305-8404.

The drawings filed (insert date) 6/17/94 are
 A. ☒ not objected to by the Draftsperson under 37 CFR 1.84 or 1.152.
 B. ☒ objected to by the Draftsperson under 37 CFR 1.84 or 1.152 as indicated below. The Examiner will require submission of new, corrected drawings when necessary. Corrected drawings must be submitted according to the instructions on the back of this Notice.

1. DRAWINGS. 37 CFR 1.84(a): Acceptable categories of drawings:

Black ink. Color.

- ☐ Not black solid lines. Fig(s) _____
- ☐ Color drawings are not acceptable until petition is granted.

2. PHOTOGRAPHS. 37 CFR 1.84(b)

- ☐ Photographs are not acceptable until petition is granted.

3. GRAPHIC FORMS. 37 CFR 1.84 (d)

- ☐ Chemical or mathematical formula not labeled as separate figure. Fig(s) _____
- ☐ Group of waveforms not presented as a single figure, using common vertical axis with time extending along horizontal axis. Fig(s) _____
- ☐ Individual's waveform not identified with a separate letter designation adjacent to the vertical axis. Fig(s) _____

4. TYPE OF PAPER. 37 CFR 1.84(e)

- ☐ Paper not flexible, strong, white, smooth, nonshiny, and durable. Sheet(s) _____
- ☐ Erasures, alterations, overwritings, interlineations, cracks, creases, and folds not allowed. Sheet(s) _____

5. SIZE OF PAPER. 37 CFR 1.84(f): Acceptable paper sizes:

- 21.6 cm. by 35.6 cm. (8 1/2 by 14 inches)
- 21.6 cm. by 33.1 cm. (8 1/2 by 13 inches)
- 21.6 cm. by 27.9 cm. (8 1/2 by 11 inches)
- 21.0 cm. by 29.7 cm. (DIN size A4)

- ☐ All drawing sheets not the same size. Sheet(s) _____
- ☐ Drawing sheet not an acceptable size. Sheet(s) _____

6. MARGINS. 37 CFR 1.84(g): Acceptable margins:

Paper size

21.6 cm. X 35.6 cm. (8 1/2 X 14 inches)	21.6 cm. X 33.1 cm. (8 1/2 X 13 inches)	21 cm. X 27.9 cm. (8 1/2 X 11 inches)	21 cm. X 29.7 cm. (DIN Size A4)
T 5.1 cm. (2")	2.5 cm. (1")	2.5 cm. (1")	2.5 cm.
L .64 cm. (1/4")	.64 cm. (1/4")	.64 cm. (1/4")	2.5 cm.
R .64 cm. (1/4")	.64 cm. (1/4")	.64 cm. (1/4")	1.5 cm.
B .64 cm. (1/4")	.64 cm. (1/4")	.64 cm. (1/4")	1.0 cm.

Margins do not conform to chart above.

Sheet(s) _____

☒ Top (T) ☒ Left (L) ☐ Right (R) ☐ Bottom (B)

7. VIEWS. 37 CFR 1.84(h)

REMINDER: Specification may require revision to correspond to drawing changes.

- ☐ All views not grouped together. Fig(s) _____
- ☐ Views connected by projection lines. Fig(s) _____
- ☐ Views contain center lines. Fig(s) _____

Partial views. 37 CFR 1.84(h)(2)

- ☐ Separate sheets not linked edge to edge. Fig(s) _____
- ☐ View and enlarged view not labeled separately. Fig(s) _____
- ☐ Long view relationship between different parts not clear and unambiguous. 37 CFR 1.84(h)(2)(ii) Fig(s) _____

Sectional views. 37 CFR 1.84(h)(3)

- ☐ Hatching not indicated for sectional portions of an object. Fig(s) _____
- ☐ Hatching of regularly spaced oblique parallel lines not spaced sufficiently. Fig(s) _____
- ☐ Hatching not at substantial angle to surrounding axes or principal lines. Fig(s) _____
- ☐ Cross section not drawn same as view with parts in cross section with regularly spaced parallel oblique strokes.

Modified forms. 37 CFR 1.84(h)(5)

- ☐ Modified forms of construction must be shown in separate views. Fig(s) _____

8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)

- ☐ View placed upon another view or within outline of another. Fig(s) _____
- ☐ Words do not appear in a horizontal, left-to-right fashion when page is either upright or turned so that the top becomes the right side, except for graphs. Fig(s) _____

9. SCALE. 37 CFR 1.84(k)

- ☐ Scale not large enough to show mechanism without crowding when drawing is reduced in size to two-thirds in reproduction. Fig(s) _____
- ☐ Indication such as "actual size" or "scale 1/2" not permitted. Fig(s) _____
- ☐ Elements of same view not in proportion to each other. Fig(s) _____

10. CHARACTER OF LINES, NUMBERS, & LETTERS. 37 CFR 1.84(l)

- ☒ Lines, numbers & letters not uniformly thick and well defined, clean, durable, and black (except for color drawings). Fig(s) 1-2

11. SHADING. 37 CFR 1.84(m)

- ☐ Shading used for other than shape of spherical, cylindrical, and conical elements of an object, or for flat parts. Fig(s) _____
- ☐ Solid black shading areas not permitted. Fig(s) _____

12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.84(p)

- ☒ Numbers and reference characters not plain and legible. 37 CFR 1.84(p)(1) Fig(s) 1-2
- ☐ Numbers and reference characters used in conjunction with brackets, inverted commas, or enclosed within outlines. 37 CFR 1.84(p)(1) Fig(s) _____
- ☐ Numbers and reference characters not oriented in same direction as the view. 37 CFR 1.84(p)(1) Fig(s) _____
- ☐ English alphabet not used. 37 CFR 1.84(p)(2) Fig(s) _____
- ☐ Numbers, letters, and reference characters do not measure at least .32 cm. (1/8 inch) in height. 37 CFR(p)(3) Fig(s) _____

13. LEAD LINES. 37 CFR 1.84(q)

- ☐ Lead lines cross each other. Fig(s) _____
- ☐ Lead lines missing. Fig(s) _____
- ☐ Lead lines not as short as possible. Fig(s) _____

14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.84(t)

- ☐ Number appears in top margin. Fig(s) _____
- ☐ Number not larger than reference characters. Fig(s) _____
- ☐ Sheets not numbered consecutively, and in Arabic numerals, beginning with number 1. Sheet(s) _____

15. NUMBER OF VIEWS. 37 CFR 1.84(u)

- ☐ Views not numbered consecutively, and in Arabic numerals, beginning with number 1. Fig(s) _____
- ☐ View numbers not preceded by the abbreviation Fig. Fig(s) _____
- ☐ Single view contains a view number and the abbreviation Fig. Fig(s) _____
- ☐ Numbers not larger than reference characters. Fig(s) _____

16. CORRECTIONS. 37 CFR 1.84(v)

- ☐ Corrections not durable and permanent. Fig(s) _____

NOTICE OF REFERENCES CITED

APPLICANT(S)

London et al.

U.S. PATENT DOCUMENTS

*	DOCUMENT NO.							DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE	
	A	5	4	9	9	3	3	5	3/12/96	Silver et al.	395	161	9/21/95
	B	5	4	3	7	0	0	7	7/25/95	Bailey et al.	395	159	11/10/92
	C	5	4	3	0	8	3	8	7/4/95	Kuno et al.	395	157	9/9/93
	D	5	4	2	5	1	4	1	6/13/95	bedye	395	157	3/21/94
	E	5	4	5	5	9	0	4	10/3/95	Bouchet et al.	395	157	11/22/94
	F	5	4	6	1	7	1	6	10/24/95	Eagen et al.	395	157	4/13/95
	G	5	4	5	0	6	0	0	9/12/95	Abe	395	800	10/28/92
	H												
	I												
	J												
	K												

FOREIGN PATENT DOCUMENTS

*		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP. SPEC.
L									
M									
N									
O									
P									
Q									

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

R	
S	
T	
U	

EXAMINER

DATE

Steve Sax

6/4/96



0500 Columbia Center
Seattle, Washington 98104-7092
Phone (206) 622-4900
Fax (206) 682-6031

Docket No.: 870038.581
Date: September 6, 1996

In re application of **Mitchell B. London et al.**
Application No.: **08/261,492**
Filed: **June 17, 1994**
For: **METHOD FOR PROVIDING REMOTE DISPLAY OF AN APPLICATION PROGRAM**

Box Non-Fee Amendment
ASSISTANT COMMISSIONER FOR PATENTS
2011 JEFFERSON DAVIS HIGHWAY
WASHINGTON DC 20231

Sir:

Transmitted herewith is a response in the above-identified application.

- ☐ Small entity status of this application under 37 CFR 1.9 and 1.27 has been established by a verified statement previously submitted.
- ☐ A verified statement to establish small entity status under CFR 1.9 and 1.27 is enclosed.
- ☐ A Petition for an Extension of Time for month is enclosed.
- ☒ No additional claim fee is required.
- ☐ The fee has been calculated as shown.

	(Col. 1)		(Col. 2)	(Col. 3)
	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST PREV. PAID FOR	PRESENT EXTRA
TOTAL	* 13	MINUS	** 20	0
INDEP.	* 6	MINUS	*** 6	0
[] FIRST PRESENTATION OF MULTIPLE CLAIMS				
EXTENSION OF TIME FEE				
TOTAL ADDITIONAL FEE				

SMALL ENTITY	
RATE	ADDITIONAL FEE
x 11.	\$
x 39.	\$
+ 125.	\$
	\$
	\$

OR

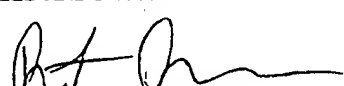
OTHER THAN A SMALL ENTITY	
RATE	ADDITIONAL FEE
x 22.	\$
x 78.	\$
+ 250.	\$
	\$
	\$

OR
TOTAL

- * If the entry in Col. 1 is less than the entry in Col. 2, write "0" in Col. 3.
- ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, write "20" in this space.
- *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, write "3" in this space.
- The "Highest Number Previously Paid For" (Total or Independent) is the highest number found from the equivalent box in Col. 1 of a prior amendment or the number of claims originally filed.

- ☐ Please charge my Deposit Account No. 19-1090 in the amount of \$_. A duplicate copy of this sheet is enclosed.
- ☐ A check in the amount of \$_ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge payment of the following additional fees associated with this communication or credit any overpayment to Deposit Account No. 19-1090. A duplicate copy of this sheet is enclosed.
- ☒ Any filing fees under 37 CFR 1.16 for the presentation of extra claims.
- ☒ Any patent application processing fees under 37 CFR 1.17.

Respectfully submitted,
Mitchell B. London et al.
SEED AND BERRY LLP


Robert Iannucci
Registration No. 33,514



PATENT

m.b.
4-21-96P. Will
9/23/96

I hereby certify that on the date specified below, this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to the Assistant Commissioner for Patents, 2011 Jefferson Davis Highway, Washington, DC 20231.

Date

9/16/96

Robert Iannucci

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Mitchell B. London et al.
Application No. : 08/261,492
Filed : June 17, 1994
For : METHOD FOR PROVIDING REMOTE DISPLAY OF AN
APPLICATION PROGRAM

Examiner : Steve Sax
Art Unit : 2415
Docket No. : 870038.581
Date : September 6, 1996

Box Non-Fee Amendment
Assistant Commissioner for Patents
2011 Jefferson Davis Highway
Washington, DC 20231

AMENDMENT

Sir:

In response to the Office Action dated June 14, 1996, please amend the application as follows.

In the Claims:

Please amend claims 1-5 and 8-12 as follows:

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96 SEP 20 PM 9:47
GROUP: 240

1. (Amended) A method for running a Windows-NT application as an X-client so as to enable the application to be displayed with an X-windows manager, the Windows-NT application having a device driver, the method comprising the steps of:

launching a Windows-NT session;

invoking [at least] a Windows-NT application from within the Windows-NT session;

monitoring output messages that are sent from the Windows-NT application;

determining [when] that one of the monitored output messages is a graphical user interface command; and

when the monitored output message is a graphical user-interface command, [suspending] preventing the Windows-NT device driver from acting on the command, [allowing] enabling an X-Windows manager program to act on the command, and informing the Windows-NT device driver of results of the command which was acted on by the X-Windows manager program.

2. (Amended) The method of claim 1[, further comprising the step of:] wherein the enabling step includes converting the graphical user interface command from [the] a Windows-NT format into a format that is [interpretable] recognized by the X-windows manager so as to [allow] enable the X-windows manager program to act on the command.

3. (Amended) A method for providing remote access to an application program that is executing in a native operating system, wherein the native operating system provides an application interface to receive commands from the application program, and wherein the native operating system provides a native graphical user interface [in which it receives] structured to respond to graphical user interface commands received from the application program, the method comprising the steps of:

monitoring a message that is output from the application program to the application interface;

intercepting the monitored message when the monitored message [is an operation that affects external features of the] includes a graphical user interface command directed to the native graphical user interface;

redirecting the intercepted message to a non-native graphical user interface;
and [manager to enable]

enabling the non-native graphical user interface [manager] to [conduct the operation] act on the graphical user interface command of the monitored message.

4. (Amended) The method of claim 3, further comprising the step of:

informing the native operating system of results produced by the non-native graphical user interface manager acting on the graphical user interface command of the intercepted message.

5. (Amended) A method for providing remote display and interaction with an application program that is executing on a local machine, the local machine executing the application [in] program using a native operating system, wherein the native operating system [provides] includes an local application interface to receive commands from the application program, and wherein the native operating system [provides] includes a local graphical user interface [in which it receives] structured to respond to graphical user interface commands received from the application program, the method comprising the steps of:

detecting a graphical user interface command that is output from the application program to the application interface; [and]

converting the detected [message] graphical user interface command from a first format recognized by the local graphical user interface [format] to a second format recognized by a remote graphical user interface; and [format]

sending the converted command to the remote graphical user interface so that the [detected message] converted command can be interpreted by [a] the remote graphical user interface.

12 8. (Amended) A method for providing remote user interaction with an application program that is being run in its native environment on a host machine, the native environment providing a local graphical user interface for allowing local user interaction with the application program, the method comprising the steps of:

determining when the application program has sent a command to the local graphical user interface;

suspending the local user interface's ability to process the determined command; [and]

converting the determined command to a protocol that is recognizable by a remote graphical user interface; and

sending the converted command to the remote graphical user interface to enable the remote graphical user interface to act on the converted command.

A3 10. (Amended) A method for providing [remote] user interaction with an application program that is being [run in a first environment,] executed using an operating system that includes a first graphical user interface, the method comprising the steps of:

determining [when] that the application program has sent a command that is intended to [affects] affect a video display, the command being in a first format that can be interpreted by the first graphical user interface; [and]

converting the determined command from the first format to a [protocol] second format that is recognizable by a second [environment,] graphical user interface but that is not recognizable by the first graphical user interface wherein the second [environment] graphical user interface is distinct from the first [environment] graphical user interface; and

sending the converted command to the second graphical user interface to enable the second graphical user interface to act on the converted command.

11. (Amended) The method of claim 10 wherein the first [environment] graphical user interface is a native [environment] graphical user interface for which the application program was developed and wherein the second [environment] graphical user interface is a [remote windowing environment] graphical user interface for which the application program was not developed.

12. (Amended) [An apparatus] A computer system that [allows] executes an application program [to be treated as a remote X-client while the application program is running in a non-Unix environment] using an operating system that includes a first graphical user interface that has an ability to process graphical user interface commands, the [apparatus] computer system comprising:

a monitoring device that determines [when] that the application program has sent a command to [a local] the first graphical user interface, the [local graphical user interface being provided by the non-Unix environment] command being in a first format that is recognizable by the first graphical user interface;

a disabling device that suspends the local first graphical user interface's ability to process the determined command; and

a modifier that converts the determined command from the first format to a [protocol] second format that is recognizable by a [remote] second graphical user interface and sends the converted command to the second graphical user interface to enable the second graphical user interface to act on the converted command.

Please add the following claim 13.

13. The method of claim 3 wherein the enabling step includes converting the graphical user interface command from a first format recognizable by the native operating system to a second format that is recognizable by the non-native graphical user interface.

REMARKS

Claims 1-13 will be pending upon entry of the present amendment. Claims 1-12 were rejected. Claims 1-5 and 8-12 are being amended. Claim 13 is being newly presented.

The present invention is directed to a computer system and method that enables data from an application program designed for a first graphical user interface to be displayed using a second graphical user interface for which the application program was not

designed. The method monitors a message that is output from the application program to the operating system. If the message includes a graphical user interface command, then the message is intercepted and the graphical user interface command is converted from a first format recognizable by the first graphical user interface to a second format recognizable by a second graphical user interface. The converted graphical user interface command then is sent to the second graphical user interface to enable the second graphical user interface to act on the converted graphical user interface command.

For example, in the preferred embodiment the first graphical user interface is Microsoft Windows-NT and the second graphical user interface is any of the graphical user interfaces employed by the X-Windows system. As is well known in the art, the Microsoft Windows-NT graphical user interface displays data on a computer screen according to an easily recognizable display format. The graphical user interfaces employed by the X-Windows system display data in an entirely different format than the display format provided by the Microsoft Windows-NT graphical user interface. The present invention provides a method and system that enables data from an application program designed for Microsoft Windows-NT to be displayed in the display format of one of the X-Windows graphical user interfaces without having to reprogram the application program.

The Examiner rejected claims 3-5, 8, and 10-11 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,461,716 to Eagen et al. ("Eagen"). In addition, the Examiner rejected claims 1-2, 6-7, 9, and 12 under 35 U.S.C. § 103 as being obvious in view of Eagen.

Eagen is directed to a computer system having a host processor interconnected through a plurality of workstation controllers to a number of programmable and nonprogrammable terminals. In order to display a user-interface window on a display screen associated with one of the terminals, the host processor sends information regarding the position, size, and contents of the window to the workstation controller for the terminal. The workstation controller performs processing steps needed to display the user interface window on the display screen, such as determining the color and borders of the window and the arrangement of the contents within the window.

The applicants submit that Eagen does not disclose, teach, or suggest the invention recited in claims 1-13. Each of these claims, as amended, are directed to a method or system that enables a graphical user interface command directed to a first graphical user interface to be acted on by a second graphical user interface. For example, independent claim 3 recites the steps of:

intercepting [a] monitored message when the monitored message includes a graphical user interface command directed to the native graphical user interface;

redirecting the intercepted message to a non-native graphical user interface; and

enabling the non-native graphical user interface to act on the graphical user interface command of the monitored message.

Eagen does not disclose, teach, or suggest a method or system for enabling a second graphical user interface to act on a graphical user interface command directed to a first graphical user interface. In particular, Eagen does not teach or suggest any of the intercepting, redirecting, and enabling steps quoted above for claim 3. Instead, Eagen employs a single graphical user interface that is employed by the workstation controller. The host processor does not have a graphical user interface to which graphical user interface commands can be directed. The host processor defines the informational content to be displayed and commands the workstation controller to display the informational content. Thus, there is never any graphical user interface command directed to a first user interface which is intercepted and redirected to a second user interface.

The Examiner refers to Figure 9 of Eagen as disclosing the claimed invention. The applicants disagree. As shown in Figure 9, the host processor simply issues a graphical user interface command entitled "REMOVE WINDOW" that is implemented by the workstation controller (WSC) and displayed on the workstation (DWS/PWS). None of the devices shown in Figure 9 intercepts a graphical user interface command directed to a first graphical user interface, redirects the command to a second graphical user interface, or enables the second graphical user interface to act on such a redirected command.

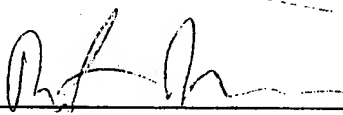
For the foregoing reasons, the applicants submit that claims 1-13 are allowable over Eagen.

In addition, Claims 2 and 5-13 each recite additional elements that are not taught or suggested by Eagen. In particular, claims 2 and 5-13 each recite that a graphical user interface command is converted from a first format recognizable by a first graphical user interface to a second format recognizable by the second graphical user interface. Such a conversion enables informational content from an application program to be displayed according to a second graphical user interface even though the application program is designed to communicate with the first graphical user interface rather than the second graphical user interface. Eagen does not disclose, teach, or suggest such a conversion. Instead, Eagen simply sends a graphical user interface command from the host processor to the workstation controller and the workstation controller implements the command received from the host processor without requiring the graphical user interface command to be converted from a first format to a second format. Accordingly, the applicants submit that claims 2 and 5-13 are not anticipated or rendered obvious by Eagen.

Claims 1-2 are directed to an embodiment in which a graphical user interface command directed to the Microsoft Windows-NT graphical user interface is intercepted and acted on by the X-Windows Manager program. The applicants submit that there is nothing in Eagen that would suggest acting on a Microsoft Windows-NT graphical user interface command using an X-Windows Manager program. For example, there is no way that the Eagen system shown in Figure 9 could be implemented by a host processor using the Windows-NT operating system and a workstation controller using the X-Windows system. If the host processor transmitted the "REMOVE WINDOW" command in Windows-NT format, then the X-Windows system of the workstation controller would either ignore the transmission or indicate that the transmission was in error because the X-Windows system does not recognize Windows-NT commands. Accordingly, the invention recited in claims 1-2 would not be anticipated or rendered obvious by Eagen.

In view of the foregoing discussion, the applicants respectfully submit that claims 1-13 are allowable over Eagen. Accordingly, the applicants respectfully request reconsideration of the rejections and the issuance of a Notice of Allowance.

Respectfully submitted,
Mitchell B. London et al.
SEED and BERRY LLP



Robert Iannucci
Registration No. 33,514

RI:ag

Enclosures:

Postcard
Form PTO-1083 (+ copy)

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SEATTLE WA 98104-7092

24M1/1114

EXAMINER

ART UNIT

PAPER NUMBER

2415

6

DATE MAILED: 11/14/96

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 11/10/96 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), — days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152. |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-13 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☒ Claims 1-13 are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☒ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

Art Unit: 2415

1. This application has been examined.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-13 are rejected under 35 U.S.C. § 102(e) as being anticipated by Gechter (5498003).

4. Regarding claims 1-13, Gechter shows in Figure 2, Figure 10, Figure 14, column 2 lines 1-55, column 3 lines 35-68, column 4 lines 1-60, column 5, column 6 lines 27-68, column 7 lines 10-50, column 14 lines 20-68, and column 15, a system for providing remote access to application programs executing in a native operating system, wherein the native operating system provides an application interface to receive commands from the application program, and wherein the operating system provides a graphical user interface in which it receives commands from the application program. The system monitors a message output from the application program to the interface, intercepts it if it includes a graphical user interface command directed to the

Serial Number: 08/261492

-3-

Art Unit: 2415

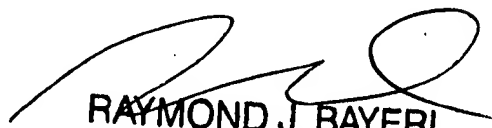
native graphical user interface, redirects the intercepted message to a non-native graphical user interface manager to conduct the operation, and informs the native system of the results. The detected commands are converted to a remote and distinct format protocol and the local user interface's ability to process the commands is suspended. The commands affect the video display and the environment in which the applications are run is a windowing environment.

The system uses Windows NT and X-Windows, and utilizes these as two graphical user interfaces to display data from an application program from one using the other.

5. Applicant's arguments with respect to claims 1-12 have been considered but are deemed to be moot in view of the new grounds of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Sax whose telephone number is (703) 305-9582.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3800.



RAYMOND J. BAYERL
PRIMARY EXAMINER
ART UNIT 2415

U.S. PATENT DOCUMENTS

°		DOCUMENT NO.						DATE	NAME	CLASS	SUB-CLASS	FILING DATE IF APPROPRIATE	
	A	5	4	9	8	0	0	3	3/12/96	Gechter	273	434	12/6/97
	B	5	3	7	5	0	6	8	12/20/94	Palmer et al.	364	514	6/8/97
	C	5	5	4	6	3	2	4	8/13/96	Palmer et al.	364	514	11/28/94
	D	5	4	7	5	4	2	1	12/12/95	Palmer et al.	364	514	7/16/92
	E												
	F												
	G												
	H												
	I												
	J												
	K												

FOREIGN PATENT DOCUMENTS

°		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP. SPEC.
L									
M									
N									
O									
P									
Q									

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

R	
S	
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U	

EXAMINER

Stev Sax

DATE

11/8/96



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NUMBER	06/17/96	FILING DATE	ENDON	FIRST NAMED APPLICANT	M	ATTORNEY DOCKET NO.	151
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SEED AND BERRY
6300 COLUMBIA CENTER
SEATTLE WA 98104-7092

E6M1/0528

SAX, S EXAMINER

2445 ART UNIT PAPER NUMBER

05/28/97

DATE MAILED:

NOTICE OF ABANDONMENT

This application is abandoned in view of:

☒ Applicant's failure to timely file a proper response to the Office letter mailed on 11/14/96.

☐ A response (with a Certificate of Mailing or Transmission of _____) was received on _____, which is after the expiration of the period for response (including a total extension of time of _____ month(s)) which expired on _____.

☐ A proposed response was received on _____, but it does not constitute a proper response to the final rejection.

(A proper response to a final rejection consists only of: a timely filed amendment which places the application in condition for allowance; a Notice of Appeal; or the filing of a continuing application under 37 CFR 1.62 (FWC).

☒ No response has been received.

☐ Applicant's failure to timely pay the required issue fee within the statutory period of three months from the mailing date of the Notice of Allowance.

☐ The issue fee (with a Certificate of Mailing or Transmission of _____) was received on _____.

☐ The submitted issue fee of \$_____ is insufficient. The issue fee required by 37 CFR 1.18 is \$_____.

☐ The issue fee has not been received.

☐ Applicant's failure to timely file new formal drawings as required in the Notice of Allowability.

☐ Proposed new formal drawings (with a Certificate of Mailing or Transmission of _____) were received on _____.

☐ The proposed new formal drawings filed _____ are not acceptable.

☐ No proposed new formal drawings have been received.

☐ The express abandonment under 37 CFR 1.62(g) in favor of the FWC application filed on _____.

☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a) upon the filing of a continuing application.

☐ The decision by the Board of Patent Appeals and Interferences rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

☐ The reason(s) below:

Attorney said let abandon.

RAYMOND J. BAYERL
PRIMARY EXAMINER
ART UNIT 2415

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

REQUEST FOR ACCESS TO AN ABANDONED APPLICATION UNDER 37 CFR 1.14

Bring completed form to:

File Information Unit, Room 2E04
2900 Crystal Drive
Arlington, VA 22202-3514

Telephone: (703) 308-2733

In re Application of

Application Number

08/261492

Filed

06-17-94

Paper No. 8

I hereby request access under 37 CFR 1.14(a)(1)(iv) to the application file record of the above-identified ABANDONED application, which is not within the file jacket of a pending Continued Prosecution Application (CPA) (37 CFR 1.53(d)) and which is identified in, or to which a benefit is claimed, in the following document (as shown in the attachment):

United States Patent Application Publication No. _____, page, _____ line

United States Patent Number 5831609, column _____, line, _____

or APR 23 2007

WIPO Pub. No. _____, page _____, line _____

Related Information About Access to Applications Maintained in the Image-File Wrapper System (IFW) and Access to Pending Applications in General

A member of the public, acting without a power to inspect, cannot order applications maintained in the IFW system through the FIU. If the member of the public is entitled to a copy of the application file, then the file is made available through the Public Patent Application Information Retrieval system (Public PAIR) on the USPTO internet web site (www.uspto.gov). Terminals that allow access to Public PAIR are available in the Public Search Room. The member of the public may also be entitled to obtain a copy of all or part of the application file upon payment of the appropriate fee. Such copies must be purchased through the Office of Public Records upon payment of the appropriate fee (37 CFR 1.19(b)).

For published applications that are still pending, a member of the public may obtain a copy of:

the file contents; the pending application as originally filed; or any document in the file of the pending application.

For unpublished applications that are still pending:

- (1) If the benefit of the pending application is claimed under 35 U.S.C. 119(e), 120, 121, or 365 in another application that has: (a) issued as a U.S. patent, or (b) published as a statutory invention registration, a U.S. patent application publication, or an international patent application publication in accordance with PCT Article 21(2), a member of the public may obtain a copy of: the file contents; the pending application as originally filed; or any document in the file of the pending application.
- (2) If the application is incorporated by reference or otherwise identified in a U.S. patent, a statutory invention registration, a U.S. patent application publication, or an international patent application publication in accordance with PCT Article 21(2), a member of the public may obtain a copy of the pending application as originally filed.

Shoaib Ahmed

Signature

04-23-07

Date

Shoaib Ahmed

Typed or printed name

Registration Number, if applicable

703-553-0000

Telephone Number

FOR PTO USE ONLY	
RECEIVED	
Approved by:	APR 23 2007
Unit:	File Information Unit

This collection of information is required by 37 CFR 1.11 and 1.14. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. BRING TO: File Information Unit, Room 2E04, 2900 Crystal Drive, Arlington, Virginia.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



US005831609A

United States Patent [19]

London et al.

[11] Patent Number: **5,831,609**[45] Date of Patent: **Nov. 3, 1998**

[54] **METHOD AND SYSTEM FOR DYNAMIC TRANSLATION BETWEEN DIFFERENT GRAPHICAL USER INTERFACE SYSTEMS**

[75] Inventors: **Mitchell B. London, Redmond; Alan R. Katz, Bellevue; Donald W. Goodrich, Auburn; Steven Zeck, Woodinville, all of Wash.**

[73] Assignee: **Exodus Technologies, Inc., Bellevue, Wash.**

[21] Appl. No.: **472,935**

[22] Filed: **Jun. 6, 1995**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 261,492, Jun. 17, 1994, abandoned.

[51] Int. Cl.⁶ **G06F 3/14**

[52] U.S. Cl. **345/335; 345/333**

[58] Field of Search **395/157, 158, 395/156, 159, 160, 335, 374, 338, 339, 340, 682, 326, 327, 341, 337, 351, 352, 353, 359, 330; 463/31**

[56] References Cited

U.S. PATENT DOCUMENTS

5,327,529 7/1994 Fulls et al. 395/335
5,361,344 11/1994 Beardsley et al. 395/500
5,375,068 12/1994 Palmer et al. 364/514

5,412,772 5/1995 Monson 395/335
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Chung et al., "Novell NCTware Multimedia Communication System Using Microsoft Windows," IEEE, 1995.

Primary Examiner—Raymond J. Bayerl

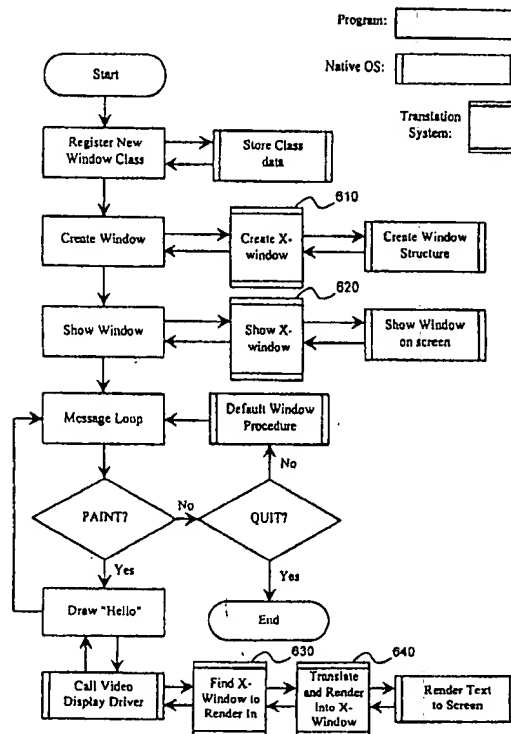
Assistant Examiner—Steven P. Sax

Attorney, Agent, or Firm—Seed and Berry LLP

[57] ABSTRACT

The present invention is directed towards a translation software that provides remote access to an application program that is executing on a host machine in its native operating system environment. The translation software monitors messages that are relayed from the application program to an application interface that is provided via the native operating system. Upon recognizing a message that affects a graphical user interface of the native operating system, the translation software converts the message into a protocol that is recognized by a remote graphical user interface. By monitoring and converting messages in this fashion, the translation software allows the application program to be displayed remotely.

11 Claims, 6 Drawing Sheets



PATENT APPLICATION FEE DETERMINATION RECORD

Effective October 1, 1994

Application or Docket Number

26/492

CLAIMS AS FILED - PART I

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA
BASIC FEE		
TOTAL CLAIMS	18 minus 20 = *	
INDEPENDENT CLAIMS	6 minus 3 = *	3
MULTIPLE DEPENDENT CLAIM PRESENT		

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY

OR

OTHER THAN SMALL ENTITY

RATE	FEE
	365.00
x\$11=	
x38=	
+120=	
TOTAL	

RATE	FEE
	730.00
x\$22=	
x76=	228
+240=	
TOTAL	958.

CLAIMS AS AMENDED - PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total * 13 Minus ** 20 =		
	Independent * 6 Minus *** 0 =		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM		

SMALL ENTITY

OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE
x\$11=	
x38=	
+120=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
x\$22=	
x76=	
+240=	
TOTAL ADDIT. FEE	

AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total * Minus ** =		
	Independent * Minus *** =		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM		

RATE	ADDITIONAL FEE
x\$11=	
x38=	
+120=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
x\$22=	
x76=	
+240=	
TOTAL ADDIT. FEE	

AMENDMENT C	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
	Total * Minus ** =		
	Independent * Minus *** =		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM		

RATE	ADDITIONAL FEE
x\$11=	
x38=	
+120=	
TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE
x\$22=	
x76=	
+240=	
TOTAL ADDIT. FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20."
 *** If the Highest Number Previously Paid For IN THIS SPACE is less than 3, enter "3."
 The Highest Number Previously Paid For (Total or Independent) is the highest number found in the appropriate box in column 1.

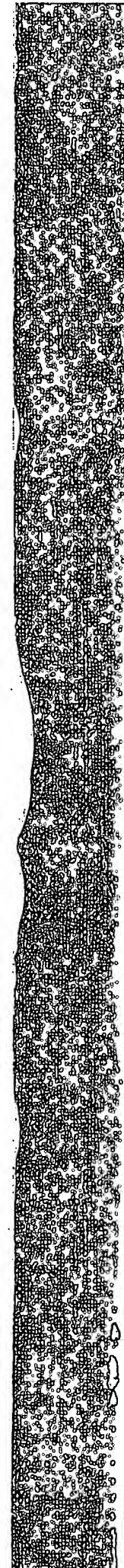
Class	Sub.	Date	Exmr.
395 ↓	155 156 157 158 159 160	6/4/96 ↓	FL ↓
	updated	11/96	FL

395/103

SEARCH NOTES		
Involvement	Date	Exmr.
APS	6/4/96	FL
updated	11/96	FL

INTERFERENCE SEARCHED

Class	Sub.	Date	Exmr.



EXAMINER		38	7/13/94
TYPIST		333 11-30-94	
VERIFIER		12/10/94	
CORPS CORR.			
SPEC. HAND		488	11/28/94
FILE MAINT.		4/31	7-18-94
DRAFTING			

INDEX OF CLAIMS

Claim		Date			
Final	Original				
	(1)	✓	✓		
	2				
	(3)				
	4				
	(5)				
	6				
	7				
	(8)				
	9				
	(10)				
	11				
	(12)	✓	✓		
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Claim		Date			
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	82				

SYMBOLS

✓ Rejected
 = Allowed
 - (Through numeral) Canceled
 + Restricted
 N Non-elected
 I Interference
 A Appeal
 O Objected

2303

348/157 OR

345/650 !

or
Counted

CONTENTS

or
Mailed

RECEIVED

DEC 20 1994

ABANDONED

GROUP 2300

1. Application ☒ papers.

2. LETTER Declaration

3. Dec 20/94

6-10-96

4. Ref 3

10/24/94

5. Amble a

8-14-96

9-10-96

11-13-96

6. Ref 3 mons

11-14-96

5-23-97

7. Abandon

5-28-97

8. Request for action

of 23-02

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